THE BUFFER HANDBOOK PLANT LIST

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Please read this section before choosing plants for your buffer. It is important to understand how plants were selected for this plant list and to understand the meanings of the various terms and abbreviations used in the list.

PLANT SELECTION

- Plants were selected that are low-maintenance, long-lived, hardy and sturdy. A few short-lived plants were included if they spread or self-seed easily. Low-maintenance means, for the most part, that plants do not need pruning, staking, mulching or regular dividing. In some cases, these activities may improve the form of the plant but not affect its ability to function in a buffer and therefore can be performed at the discretion of the land owner. Generally, buffer plants should be sturdy and, once established, able to hold their own against weeds and invasive plants. Plants that require little competition to thrive or special care were not included on this list. Following is a brief summary of the possible benefits of light maintenance:

  Pruning Pruning can sometimes help fill out and invigorate a scraggly shrub but pruning to create a tight, landscaped appearance as is done with many evergreens can limit the plant's ability to absorb rain and make them vulnerable to insects, disease and drought.

  Staking Some of the taller plants included on this list may benefit from staking if they are grown alone or in the open. In a buffer, there should be enough other vegetation to keep things upright. Your site will help determine this; plants in windy locations may need staking, then again you may want to avoid tall plants if you have a lot of wind.

  Mulching Many perennials require winter mulching to protect from freezing and thawing. Most of the plants on this list are hardy enough to not need winter mulch, provided they are not grown beyond their hardiness limit. Here again it can depend on the exposure of your site. You should ask the nursery about this at the time of purchase.

  Dividing Plants that need regular dividing to maintain vigor were not included on this list. They can be used in a buffer if you are willing to maintain them and keep buffer disturbance to a minimum in the process. Plants such as daylily and iris can form large clumps that benefit from dividing, however, for most varieties, dividing need only be done every 5 to 10 years. Daylilies will continue to thrive without dividing but will produce fewer flowers. Some irises can go indefinitely without dividing and others will die from the center of the clump out. Keep this in mind when selecting varieties for your buffer.

- Many sources were used in the preparation of this plant list. Occasional discrepancies were found in maximum size and hardiness zone. Every attempt was made to provide accurate information but size and hardiness zone should always be double-checked at the nursery.

- Some plants (flowers in particular) were included simply because they add beauty, are good space fillers or attract birds and butterflies. Some of these die back earlier than others and therefore do not provide as much buffering capacity so should not be planted exclusively. On the other hand, some of these emerge early in the spring and provide cover before other plants get started. Virginia Bluebells, Oriental and Hardy Lilies and many bulbs fall into this category.

- For the most part, plants that are hard to come by were left out even if they would be good in a buffer. This was done to avoid frustration on the part of someone looking in vain for a particular plant and to avoid plants being dug from the wild where they may be in limited supply or hard to identify. Examples of these are; Balsam Poplar, Black Willow and Hog Peanut. These and others can be used in buffers if a source can be located. On the other hand, some plants that are hard to find were included because they are native and would be very beneficial in tough situations. Examples of these are; Sweet Fern, Sweet Gale and some ferns. Often local nurseries will have locally native plants that are not available at the larger, franchised nurseries.

- Many of the plants on this list have been cultivated into numerous varieties and new ones are being created yearly. Only well-established varieties or those particularly suited to buffers are mentioned specifically in this list. Chances are, you will have several choices of varieties at the nursery. In choosing, keep in mind the qualities that make plants good for buffers (low-maintenance, long-lived, hardy and sturdy).

PLANT LIST ORGANIZATION & INFORMATION

- The plants are listed in two formats; a chart and a narrative list. The chart includes the zone, sun and soil requirements for each plant and can be used for quick reference to identify which plants are suited to your site. Once you know which plants can grow in your location, you can go to the narrative list for details about each plant (size, flowers, uses etc.) and choose the ones you want in your buffer.

- Within each format, the plant list is divided into three major categories; trees, shrubs and ground layers.

    - Trees are further divided into deciduous and evergreen categories.
    - Shrubs are divided into three categories based on height; large shrubs/small trees, medium shrubs and small shrubs. Each of these groups is further divided into deciduous and evergreen categories.
    - Ground layers are divided into four categories based on type of plant; perennial flowers & herbs, ferns, grasses and vines.

- Within each subcategory, plants are listed alphabetically by the name most often associated with that plant in this area. Sometimes this is the 'common name' such as 'daisy' or 'balsam fir' and other times it is the latin name or 'scientific name' such as 'spirea' or 'pachysandra'. This name is followed by the latin name in parentheses and italics. The latin name is universal and can be used anywhere to describe a plant. Common names vary from region to region, even sometimes quite locally. For plants with several well-known common names, one is used first and the others are listed after the latin name. Not all names are listed as some plants have numerous common names!

- The plant sizes that are given are the maximum size (especially for trees). There will be much variation in how large a plant gets depending on the particular variety, the zone and specific location where it is planted. Check with your nursery for expected sizes in your area.

- Many plants come in standard and dwarf varieties. Except for trees, when this is the case for a plant on this list, the plant is listed in the largest size category that it occurs and an asterisk is shown on the chart to indicate that it is also available in dwarf form(s). For instance, lilac is listed only in 'small trees/large shrubs even though varieties can be found in smaller sizes. For trees, the standard form and the dwarf form are listed in separate categories. For instance, balsam fir is listed in 'trees' and dwarf balsam fir is listed in 'small

- Tolerances for things like salt, drought, flooding etc. are given for plants where these tolerances are known for certain. There may be other plants with these tolerances as well. Always check with your nursery supplier for this information.

- The cold hardiness zones are shown in bold at the end of each description. Zones 3, 4 and 5 occur in Maine. The zone given is the coldest one tolerated, so if a plant is shown as zone 3, that means it will also tolerate zones 4 and 5. If you are on the boundary of two zones, it is best to select plants hardy in the colder zone. The zone map provided with this list is general and you should check with the local nursery for plant hardiness. Try to purchase plants that have been grown locally rather than ones brought in from far away. The locally grown ones will be hardier.

TERMS AND ABBREVIATIONS

- **Sun** or **Full Sun** Generally this means 6 or more hours of direct sun in a day.

- **Part-sun** Generally means less than 6 hours of direct sun or a full day of dappled sunlight.

- **Shade** Very little to no direct sun, especially through the middle of the day.

- **Moist** Average soil conditions, not wet, not dry. Able to retain water long enough for plants to use but not soggy.

- **Wet** Has standing water part of the time or is boggy and damp most of the time.

- **Dry** Very little moisture, often sandy soil. Dries out quickly after rain.

- **Deciduous** Deciduous plants lose their leaves or needles every winter and regrow them in the spring. Larch is the only conifer in this area that is deciduous.

- **Semi-evergreen** These plants may or may not lose all or some of their leaves or needles in the winter depending on their hardiness and the local conditions where they are grown.

- **Evergreen** These plants do not lose their leaves or needles in the winter. There may be some annual 'shedding' of old needles (as in pine) but the entire plant does not go bare. These plants continue to grow and feed throughout the winter and need sunlight and water throughout. Evergreen plants like rhododendrons need protection from too much sun and wind in winter to keep their leaves from drying out.

- **Dwarf** A smaller version of a plant. Some trees and shrubs have been bred to stay small while still retaining many of the features of the full-size form.

- **Cultivated** These plants have been developed from other plants to have certain qualities. They are not found naturally occurring unless they have escaped from local gardens into the surrounding area. Generally they are not as hardy or valuable to wildlife as naturally occurring plants. However, many desirable qualities can be found in these plants such as disease resistance and increased flower displays

- **Naturally-occurring** These are plants that have been introduced from elsewhere but have become well-established into the natural landscape. They generally do well and fit in well with the other plants in the area.

- **Native** These are plants that are believed to have been in place in the landscape prior to the arrival of the pilgrims. They have been long-established as part of the natural plant, animal and soil system in the area. Plants that are native to this area are indicated by an **N** in the plant descriptions. If they are native elsewhere in this country and have been introduced to Maine, they are indicated with an **(N)** whenever this information is known.

- **Multi-stemmed** This usually refers to shrubs and some small trees. Over time numerous stems arise in the same area as the original stem, forming a large clump. These are often good for birds and wildlife and erosion control.

- **Ground Cover (G/C)** These are plants that will spread to cover a large area either by reseeding, through underground rhizomes or by tip rooting. They are often good for erosion control and for filling in difficult areas.

- **Zone** This refers to the cold hardiness of plants. The country is divided into zones based on the average annual minimum temperatures. The cold tolerance of plants is indicated by the coldest zone in which they will survive.

Non-native, **invasive** plants

The plants listed to the right are non-native plants either known or suspected to be invasive in parts, if not all, of Maine. They spread rapidly by seeds, underground rhizomes or suckers and can take over an area, eliminating the natural vegetation and therefore adversely altering the natural habitat. Once established, many of these plants are hard to eradicate. They should be avoided even if they are available through nurseries.
In addition, the **Alpine Currant** (Ribes alpinum) is the alternate host for the white pine blister rust and is illegal to grow in Maine.

***Avoid* these plants:**

- Purple loosestrife
- Non-native honeysuckles
- Japanese barberry
- Buckthorn (smooth & common)
- Oriental bittersweet
- Japanese knotweed
- Multi-flora rose

Choose alternatives:

- Norway maple
- Black locust
- Autumn olive
- Rugosa rose
- Burning bush (winged euonymus)

GENERAL TREE & SHRUB PLANTING GUIDE

- Choose plants suitable to your location; sun, moisture, wind and zone.

- Space plants according to the instructions or nursery advice, keeping in mind the eventual spread of the tree or shrub. Things may look too far apart at first, but within a few seasons will spread and fill the space.

- Dig a hole 2-3 times the width of the pot or rootball; you want the roots to spread out more than down so the wider the better.

- Dig the hole to the same depth as the pot or rootball.

- Keep the rootball intact while handling and planting. Trim off broken roots and long, trailing roots that won't fit in the hole without bending. Do not over prune roots. Dig a bigger hole if

- If the plant is root-bound (roots are in a dense, tangled mat) loosen the roots with your fingers or use a knife to make vertical cuts around the rootball to allow roots to branch out.

- Place the rootball so that it is level or slightly above the surrounding soil unless it comes with other instructions.

- In areas with very heavy or wet soil, be sure to consult with nursery personnel on how best to establish new plants in these areas.

- Do not add materials (compost, manure or other soil) to the soil unless it is very poor and you are planting something that needs better soil. If that is the case, add equal amounts of loam, compost or peat moss. In the long run it is better to plant things that can tolerate the existing conditions rather than trying to improve a large area of soil.

- Place the rootball in the hole and back-fill ½ way, flood with water to eliminate air pockets and finish filling the hole. Pack soil firmly but not too heavily. Leave a depression around the plant and flood with water again.

- Do not fertilize the first year. Most trees and shrubs do not need fertilizer at all. Fertilizer can speed growth and result in weak, poorly rooted plants. If fertilizer is used, use it sparingly and only for a year or two after the plant is established. Some plants (rhododendrons etc.) may need an acid booster if planted in non-acidic soil. In any event, apply fertilizer so that it cannot wash into a lake or stream.

- The first season, keep soil moist but not soggy. It is better to water deeply now and then (approximately once a week) rather than frequent, light waterings. It takes about 5 gallons to a 3 foot shrub to saturate the soil. Use more if the soil is particularly dry or sandy and less if the soil is heavy or wet. Take care not to wet the leaves or needles to help prevent disease. Proper watering the first year is the most critical factor to success.

- Do not stake plants unless they will not stay upright in a moderate wind. Use a broad, soft material that will not damage the bark. Remove bindings as soon as the plant can support itself and do not let the bindings get tight.

- Do not wrap trunks except for the first few winters to prevent rodent damage. Be sure to remove wrapping in the spring!

- Mulch with 2 inches of bark or cardboard taking care not to let the mulch touch the stems.

- Remove dead branches with good, sharp pruners but do not prune vigorously until the second season, if at all. Ask the nursery for advice on pruning at planting time. The need for pruning depends on the age of the plant and how long it has been potted or balled.

- In windy or sunny locations, evergreens may benefit from a wilt-proofing spray applied in the fall to prevent winter desiccation. In addition, some plants may need burlap or wooden frames to protect them from winter wind, sun and snow loads, especially when they are small. However, once a tree or shrub gets large, this is not practical. It is better to choose plants tolerant of these conditions. Ask the nursery how long a plant will need protecting and choose according to what you can manage.

- Plant bare-root plants as soon as possible. Keep the roots moist until planting and keep plant lightly covered and in a cool, shady location.

PLANTING PERENNIALS

- Generally, perennials should be planted at the same depth as they were in the pots. Carefully spread roots and plant in well-prepared soil. Take the time ahead of planting to prepare a good bed and avoid having to disturb the plants later.

- Perennials should not need fertilizer unless they are planted in a poor location or fertilizer is needed for proper flowering. Once again, it is better to choose plants suitable to your location rather than try to improve large areas of soil. The soil should be loosened and weeded and compost or manure should be well worked into the soil prior to planting. Plants will benefit from annual or occasional side-dressing with compost. Care must be taken to prevent compost and other material from washing into lakes or streams.

- The success of perennials depends on adequate watering and weeding the first few seasons. Once established, many perennials require very little maintenance, especially if they are part of a natural planting.